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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/044,846
Filing Date: November 09, 2001
Appellant(s): COUTURE ET AL.

Timothy Nauman and Joseph Walters
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/28/2005 appealing from the Office action mailed 6/13/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 4-9 and 66-82 are rejected under 35 U.S.C. 102(b) as being anticipated by Qin et al. (US Pat. 5,550,189).

In regards to claims 4-9, 66-68, and 70-73, Qin teaches a water-swellable modified polysaccharide formed by mixing the modified polysaccharide, water, and a crosslinking agent (see abstract; col. 3, ln. 15-17; col. 13, ln. 63-66). The polysaccharide is carboxyalkyl polysaccharide, such as carboxymethyl cellulose or carboxymethyl starch; and the crosslinking agent is ethylene glycol or butylene glycol (see paragraph bridging col. 5-col. 6; col. 6, ln. 2-11; col. 13, ln. 1-15). Qin further discloses suitable crosslinking agents, such as ethylene and butylene glycols, would have functional groups reacting with carboxyl and hydroxyl groups of the carboxyalkyl polysaccharide (see col. 13, ln. 1-15). Thus, the invention of Qin would have a crosslinked polysaccharide product as presently claimed.

In regards to claim 69, the polysaccharide product is for use in personal care products, such as diapers (see col. 14, ln. 38-40). Moreover, it has been within the skill in the art that intended use would have insignificant patentable weight in a product claim.

In regards to claims 74-82, with respect to how the crosslinked polysaccharide is being formed, it has been within the skill in the art that process limitations would have insignificant patentable weight in a product claim, since the product would include the polysaccharides crosslinked by a polyalkylene oxide.

Moreover, Qin discloses the mixture of the carboxyalkyl polysaccharide, water, and the crosslinking agent can be made acidic by adding an acid, such as hydrochloric acid (see col. 14, ln. 12-23). The addition of hydrochloric acid would activate the crosslinking agent.

(10) Response to Argument

Applicant's arguments have been fully considered but they are not found persuasive.

Applicants contend that Qin differs from the presently claimed invention in that the product of the reference is a water-swellable, generally water-insoluble modified polysaccharide, i.e. carboxyalkyl polysaccharide, which has ester linkages with the cross-linking agent. However, as Qin also discloses, the water-insoluble carboxyalkyl polysaccharide is formed by mixing a water-soluble carboxyalkyl polysaccharide and a crosslinking agent, such as ethylene glycol. The water-soluble carboxyalkyl polysaccharide is made by modifying polysaccharide with a carboxyalkyl reagent; wherein the degree of substitution can be low (see col. 7, ln. 4-15). Thus, the modified polysaccharide having unsubstituted OH groups would form ether linkages with the crosslinking agent. Moreover, since Qin also discloses the same carboxyalkyl polysaccharide, i.e. carboxymethyl starch, and the same crosslinking agent, i.e. ethylene glycol, as presently claimed, a product of Qin would inherently be the same as presently claimed.

Applicants further contend that Qin differs from the presently claimed invention because the reference does not teach the use of activated polyalkylene glycols as crosslinking agents. Applicants further allege, "The use of activated polyalkylene glycols to react with the hydroxy groups on the polysaccharide results in a crosslinked backbone chain of atoms comprising repeating O-alkylene units, wherein the alkylene moieties are unsubstituted".

However, as pointed out in the Final rejection, Qin uses carboxyalkyl polysaccharides, such as carboxymethyl polysaccharide and crosslinking agents such as ethylene or methylene glycol. Since the carboxyalkyl polysaccharide in Qin has low degree of substitution, the unsubstituted OH groups in the polysaccharide would form ether linkages with the crosslinking agent. A product of Qin would at least read the presently claimed structure when, for example, taking n = 1. Thus, Qin anticipates the presently claimed invention.

In response to Applicants' allegation that free hydroxyl functions do not readily react with one another, or with ethylene glycol, or with any other unactivated polyol to form ether linkages, Applicants are reminded that this allegation is not always true. The use of ethylene glycol can also form ether linkages with the carboxyalkyl polysaccharides, which would include the presently claimed invention. Furthermore, Qin discloses the mixture of the carboxyalkyl polysaccharide, water, and the crosslinking agent can be made acidic by adding an acid, such as hydrochloric acid (see col. 14, ln. 12-23), which would make not only free carboxyl groups, but also hydroxyl groups in the polysaccharide and ethylene glycol more reactive. Thus, the products of Qin would include the presently claimed invention.

In summary, Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of

the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Thao Tran

THAO T. TRAN
PATENT EXAMINER

tt

February 9, 2006

Conferees:

James Seidleck

David Wu